What is claimed is:

1. A vertical cavity surface emitting laser comprising:

a substrate;

a first mirror situated on said substrate;

an active region situated on said first mirror;

a second mirror situated on said active region;

a first electrical contact situated on said first mirror; and

wherein:

said first mirror comprises a plurality of pairs of layers; and

one layer of at least one pair of the plurality of pairs of layers is an oxidized layer.

2. The laser of claim 1, wherein said substrate comprises InP.

3. The laser of claim 2, wherein the oxidized layer comprises at least one of a group comprising oxidized InAlAs, InAlGaAs, AlAsSb, AlGaAsSb, AlGaPSb and AlPSb.

4. The laser of claim 3, wherein one layer of at least one pair of the plurality of pairs of layers comprises InP.

5. The laser of claim 4, wherein:

said second mirror comprises a plurality of pairs of layers; and

one layer of at least one pair of the plurality of pairs of layers of said second mirror comprises InP.

6. The laser of claim 5, wherein one layer of at least one pair of the plurality of pairs of layers of said second mirror comprises InGaAsP.

7. The laser of claim 5, wherein one layer of at least one pair of the plurality of pairs of layers of said second mirror comprise one of a group comprising InGaAsP, InAlAs, InAlGaAs, AlAsSb, AlGaAsSb, AlGaPSb and AlPSb.

8. A vertical cavity surface emitting laser comprising:

a first mirror;

a cavity proximate to said first mirror; and

a second mirror proximate to said cavity; and

wherein:

said first mirror comprises a plurality of layers; and

the plurality of layers comprises at least one pair of layers having an InP layer and an oxidized layer.

9. The laser of claim 8, wherein said first mirror is proximate to an InP substrate.

10. The laser of claim 9, wherein an output of the laser may have a wavelength greater than 1200 nm.

11. The laser of claim 10, wherein said second mirror comprises a plurality of layers having at least one InP layer.

12. The laser of claim 11, wherein said cavity has at least one quantum well.

13. The laser of claim 12, wherein said second mirror comprises a partially oxidized layer for confining current.

14. The laser of claim 13, further comprising:

a first electrical contact on said second mirror; and

a second electrical contact on the substrate.

15. The laser of claim 13, further comprising:

an intra-cavity contact layer situated between said first mirror and said cavity;

a first contact on said second mirror; and

a second contact on said intra-cavity contact layer.

16. A vertical cavity surface emitting laser comprising:

a substrate comprising InP;

a first stack of layers formed on said substrate;

a quantum well region formed on said first stack of layers;

a second stack of layers formed on said quantum well region;

wherein approximately every other layer of said first stack of layers is at least partially oxidized.

17. The laser of claim 16, wherein approximately every other layer of said first stack of layers comprises InP.

18. The laser of claim 17, wherein each layer of said first and second stacks of layers has a thickness of approximately one-fourth of an optical wavelength between 1200 nm and 1800 nm.

19. The laser of claim 18, wherein the every other layer that is at least partially oxidized of said first stack of layers is formed from a material of a group comprising InGaAsP, InAlAs, InAlGaAs, AlAsSb, AlGaAsSb, AlGaPSb and AlPSb.

20. The laser of claim 19, wherein approximately every other layer of said second stack of layers comprises InP.

21. The laser of claim 20, wherein said first and second stacks of layers are distributed Bragg reflectors.

22. The laser of claim 21, wherein said second mirror comprises a partially oxidized layer for confining current.

23. A method for making a vertical cavity surface emitting laser, comprising:

forming a first stack of layers on a substrate;

forming a quantum well region on the first stack of layers;

forming a second stack of layers on the quantum well region;

forming at least one trench through the second stack of layers, the quantum well region and the first stack of layers nearly up to the substrate; and

oxidizing some layers of the first stack of layers via the at least one trench.

24. The method of claim 23, wherein the substrate comprises InP.

25. The method of claim 24, wherein some layers of the first stack of layers comprise InP.

26. The method of claim 25, wherein some layers of the first stack of layers comprise a material from a group comprising InAlAs, InAlGaAs, AlAsSb, AlGaAsSb, AlGaPSb and AlPSb.

27. The method of claim 26, wherein some of the layers of the second stack of layers comprise InP.

28. The method of claim 27, wherein the thickness of each layer of the first and second stacks of layers is

approximately one-fourth of an optical wavelength ranging from about 1200 nm through 1800 nm.

29. The method of claim 28, wherein:

the first stack of layers comprises a plurality of pairs of layers; and

at least one pair of the plurality of pairs of layers has an oxidized layer and an InP layer.

30. The method of claim 29, oxidizing a layer in the second stack of layers for confining current in the laser.